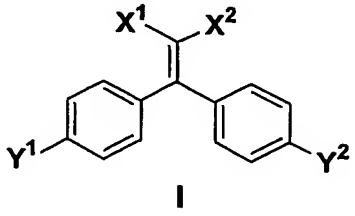
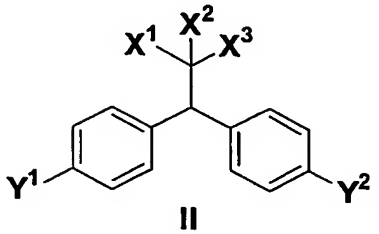
WHAT IS CLAIMED IS:

1. A monomer having a form selected from the group consisting of:



I

and



II

wherein X^1, X^2, and X^3 are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof, and wherein not all of X^1, X^2, and X^3 are H; and wherein Y^1 is a polymerizable unit.

2. The monomer of claim 1, wherein the polymerizable unit comprises a functional moiety selected from the group consisting of an epoxide, an alkene, an alkyne, and combinations thereof.

3. The monomer of claim 1, wherein the polymerizable unit comprises at least two polymerizing functional moieties.

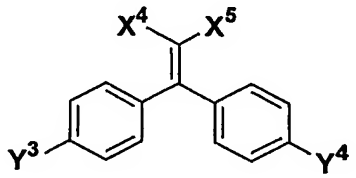
4. The monomer of claim 1, wherein the polymerizable unit is a bis-alkene.

5. The monomer of claim 1, wherein the polymerizable unit is attached to the monomer via a spacer group.

6. The monomer of claim 1, wherein the polymerizable unit is selected from the group consisting of polymerizable moieties **1-11**.

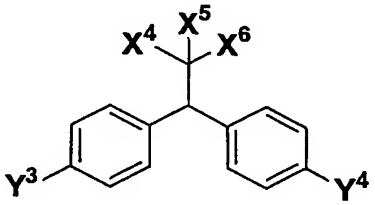
7. The monomer of claim 1, wherein Y^2 is selected from the group consisting of OH; H; Cl; Br; I; F; OR, wherein R is selected from the group consisting of alkyl, aryl, alkenyl, and combinations thereof; R, wherein R is selected from the group consisting of alkyl, alkenyl, alkynyl, and combinations thereof; and combinations thereof.

8. A polymer comprising monomers with pendant groups, the pendant groups having a form selected from the group consisting of:



III

and



IV

and combinations thereof; wherein the pendants are attached to the polymer backbone through Y^3, wherein Y^4 is selected from the group consisting of H, OH, Br, Cl, F, I, and combinations thereof; wherein X^4, X^5, and X^6 are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof, wherein not all of X^4, X^5, and X^6 are H; and wherein the polymer is flame retardant by virtue of the functionality on the pendant groups.

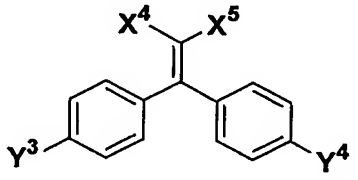
9. The polymer of claim 8, wherein the polymer backbone is selected from the group consisting of $-[CCH]_n-$, $-[CHCH_2]_n-$, and combinations thereof; and wherein the pendant groups are attached through Y^3.

10. The polymer of claim 8, wherein the polymer is a copolymer, the copolymer being of a type selected from the group consisting of alternating, random, block, and combinations thereof.

11. The copolymer of claim 8 comprising repeat units not containing pendant groups **III** and **IV**.

12. The polymer of claim 8, wherein the polymer has a structure selected from the group consisting of polymer structures **27-30**.

13. A flame retardant material comprising polymeric species comprising monomeric species comprising pendant groups, the pendant groups having a form selected from the group consisting of:



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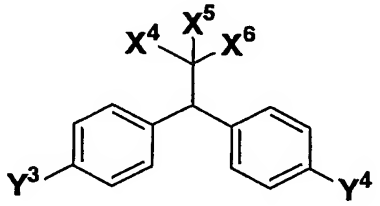


,

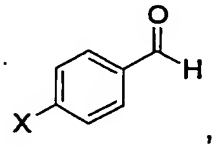
and combinations thereof, wherein the pendants are attached to the polymer backbone through Y^3, wherein Y^4 is selected from the group consisting of H, OH, Br, Cl, F, I, and combinations thereof; and wherein X^4, X^5, and X^6 are selected from the group consisting of H, Cl, Br, F, I, and combinations thereof, wherein not all of X^4, X^5, and X^6 are H.

14. The material of claim 13, wherein the material further comprises other material blended with it.

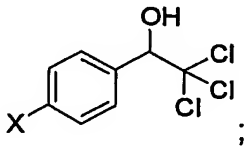
15. The material of claim 14, wherein the other material is selected from the group consisting of anti-drip agents, metal oxides, synergists, anti-degradation agents, colorants, carbon-carbon composites, and combinations thereof.

16. A method comprising the steps of:

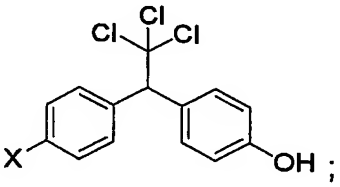
a) reacting a benzaldehyde,



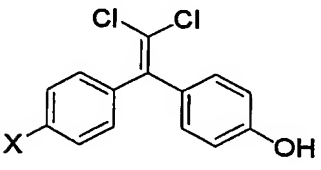
wherein X is selected from the group consisting of H, Br, Cl, and combinations thereof, with $CHCl_3$, KOH, and methyldigol to form a carbinol species,



b) reacting the carbinol species with phenol and BF_3 to yield the asymmetrical molecule,

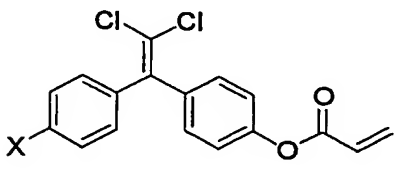


c) dehydrohalogenating the asymmetrical DDT molecule to yield **15**



; and

d) reacting **15** with acryloyl chloride to yield **17**,



wherein **17** is a flame retardant monomer.

17. The method of claim 16 further comprising the steps of:

a) exposing the flame retardant monomer to an initiating agent; and

b) polymerizing the flame retardant monomer to form polymers with flame retardant properties.

18. A method for forming a flame retardant polymer comprising the steps of:

a) providing a quantity of at least one flame retardant monomer of claim 1;

b) exposing the flame retardant monomer to an initiating agent; and

c) polymerizing the flame retardant monomer to form polymers with flame retardant properties.

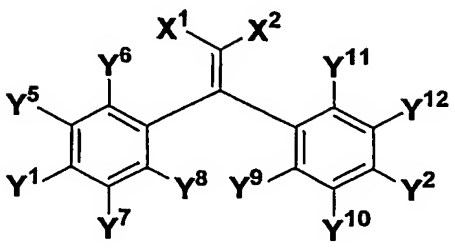
19. The method of claim 18, wherein the initiating agent is selected from the group consisting of AIBN, di-t-butylperoxide, di-benzoylperoxide, light, heat, cations, anions, catalysts, and combinations thereof.

20. The method of claim 18, wherein the flame retardant monomer is copolymerized with non-flame retardant monomer.

21. The method of claim 18 further comprising a step of adding at least one other material selected from the group consisting of anti-drip agents, metal oxides, synergists, anti-degradation agents, colorants, and combinations thereof.

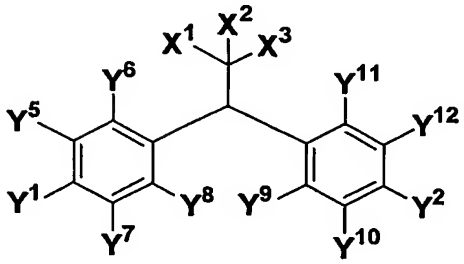
22. The method of claim 21, wherein the at least one other material is the synergist Sb_2O_3.

23. A monomer having a form selected from the group consisting of:



V

and



VI

wherein,

a) X^1-X^3 are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof, and wherein not all of X^1, X^2, and X^3 are H;

b) at least one of Y^2 and Y^9-Y^{12} is selected from the group consisting of (i) OH; (ii) H; (iii) Cl; (iv) Br; (v) I; (vi) F; (vii) OR, wherein R is selected from the group consisting of alkyl, aryl, alkenyl, and combinations thereof; (viii) R, wherein R is selected from the group consisting of alkyl, alkenyl, alkynyl, and combinations thereof; and (ix) combinations thereof;

c) the remainder of Y^2 and Y^9-Y^{12} are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof;

d) at least one of Y^1 and Y^5-Y^8 is a polymerizable unit; and

e) the remainder of Y^1 and Y^5-Y^8 are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof.

24. The polymer of Claim 23, wherein exactly one of Y^1 and Y^5-Y^8 is a polymerizable unit.

25. The polymer of Claim 24, wherein exactly one of Y^2 and Y^9-Y^{12} is selected from the group consisting of (i) OH; (ii) OR, wherein R is selected from the group

consisting of alkyl, aryl, alkenyl, and combinations thereof; (iii) R, wherein R is selected from the group consisting of alkyl, alkenyl, alkynyl, and combinations thereof; (ix) combinations of at least two of OH, OR, and R; and (x) combinations with one or more of OH, OR, and R with one or more of H, Cl, Br, F, and I.

26. The polymer of Claim 24, wherein Y^2 and Y^9-Y^{12} are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof.

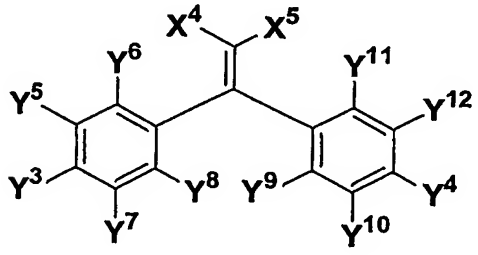
27. The polymer of Claim 22, wherein,

(a) X^1-X^3, Y^5-Y^{12} are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof, and wherein not all of X^1, X^2, and X^3 are H;

(b) Y^2 is selected from the group consisting of (i) OH; (ii) H; (iii) Cl; (iv) Br; (v) I; (vi) F; (vii) OR, wherein R is selected from the group consisting of alkyl, aryl, alkenyl, and combinations thereof; (viii) R, wherein R is selected from the group consisting of alkyl, alkenyl, alkynyl, and combinations thereof; and (ix) combinations thereof; and

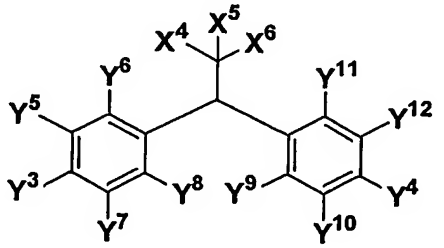
(c) Y^1 is a polymerizable unit.

28. A polymer comprising monomers with pendant groups, the pendant groups having a form selected from the group consisting of:



VII

and



VIII

and combinations thereof; wherein the pendants are attached to the polymer backbone through at least one of Y^3 and Y^5-Y^8, wherein,

(a) at least one of Y^4 and Y^9-Y^{12} is selected from the group consisting of H, OH, Br, Cl, F, I, and combinations thereof;

(b) the remainder of Y^3-Y^{12} are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof;

(c) X^4, X^5, and X^6 are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof, wherein not all of X^4, X^5, and X^6 are H; and

(d) the polymer is flame retardant by virtue of the functionality on the pendant groups.

29. The polymer of Claim 28, wherein the pendants are attached to the polymer backbone through exactly one of Y^3 and Y^5-Y^8.

30. The polymer of Claim 29, wherein exactly one of Y^4 and Y^9-Y^{12} is selected from the group consisting of OH and combinations of OH with one or more of H, Cl, Br, F, and I.

31. The polymer of Claim 29, wherein Y^4 and Y^9-Y^{12} are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof.

32. The polymer of Claim 28, wherein

a) the pendants are attached to the polymer backbone through Y^3;

b) Y^4 is selected from the group consisting of H, OH, Br, Cl, F, I, and combinations thereof; and

c) Y^5-Y^{12} are each selected from the group consisting of H, Cl, Br, F, I, and combinations thereof.